PATENT APPLICATION

THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE HONORABLE BOARD OF PATENT APPEALS AND INTERFERENCES

In re the Application of

Frank J.M. Benschop et al.

Application No.: 10/595,471

Filed: April 21, 2006

For: DIAGNOSTIC IMAGING SYSTEM WITH USER INTERFACE

Confirmation No.: 1170

Examiner: Helene Catherine Bor

Docket No.: PHNL031299US1

BRIEF ON APPEAL

Appeal from Group 3768

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I. REAL PARTY IN INTEREST

The real party in interest for this appeal and the present application is Koninklijke Philips Electronics N.V., by way of an Assignment recorded in the U.S. Patent and Trademark Office at Reel 017509, Frame 0103.

II. RELATED APPEALS AND INTERFERENCES

There are no prior or pending appeals, interferences or judicial proceedings, known to Appellant, Appellant's representative, or the Assignee, that may be related to, or which will directly affect or be directly affected by or have a bearing upon the Board's decision in the pending appeal.

III. STATUS OF CLAIMS

Claims 3-15 are pending.

Claims 1 and 2 are canceled.

Claims 3-15 are on appeal.

Claims 3-15 are rejected.

IV. STATUS OF AMENDMENTS

No amendment has been filed subsequent to the December 13, 2010 mailing date of the Office Action which is under appeal (hereinafter the "Office Action" or the "Final Office Action").

V. SUMMARY OF CLAIMED SUBJECT MATTER

The invention of **claim 6** is directed to a diagnostic imaging system (1, 11) (page 7 lines 19-26) comprising: a control system (2) to control the execution of operational items by the diagnostic imaging system (page 7 lines 26-32); and a user interface (3) coupled to the control system (page 7 line 32-page 8 line 2), the user interface including a scheduler module (4) which generates an ordered selection of operational items (page 1 lines 28-29; page 2 lines 7-15; page 8 lines 2-6) autonomously ordered by the scheduler module for execution under control of the control system, the ordered selection being generated by arranging the operational items in said ordered selection of operational items based on parameter settings of the operational items (page 2 lines 26-28; page 3 lines 24-27); wherein the scheduler module is configured to issue instructions to the user prompted by the operational items during the execution of the operational items (page 5 lines 20-29).

The invention of **claim 9** is directed to a magnetic resonance imaging system (1, 11) (page 7 lines 19-26) comprising: a control system (2) to control the execution of operational items by the magnetic resonance imaging system (page 7 lines 26-32); a user interface (3) coupled to the control system (page 7 line 32-page 8 line 2), the user interface including a scheduler module (4) which generates an ordered selection of operational items for execution controlled by the control system (page 1 lines 28-29; page 2 lines 7-15; page 8 lines 2-6), wherein the scheduler module autonomously orders the operational items by arranging the operational items in said ordered selection of operational items based on respective parameter settings of the operational items (page 3 lines 24-27); and a displaceable patient support (page 5

lines 30-34) wherein the control system is set up to displace the patient support among various imaging stations and conduct several different magnetic resonance imaging sequences at individual imaging stations, the control system grouping all image acquisition sequences to be performed at each individual station together and performing all image acquisition sequences to be performed at each individual station together before the patient support is moved to a next station of the various imaging stations (page 5 line 32-page 6 line 7; page 9 lines 5-19).

The invention of **claim 15** is directed to a diagnostic imaging system (1, 11) (page 7 lines 19-26) comprising: a control system (2) to control the execution of operational items by the diagnostic imaging system on the basis of an execution list (5) (page 7 lines 26-32); and a user interface (3) coupled to the control system (page 7 line 32-page 8 line 2), the user interface including a scheduler module (4) which generates an ordered selection of operational items (page 1 lines 28-29; page 2 lines 7-15; page 8 lines 2-6), wherein the scheduler module autonomously orders the operational items by arranging the operational items in said ordered selection of operational items based on respective parameter settings of the operational items (page 2 lines 26-28; page 3 lines 24-27), and wherein the scheduler module releases operational items to the execution list according to the ordered selection (page 4 lines 1-5) and provides progress information to the user interface during a diagnostic imaging session related to the way the execution of operational items is advancing in the diagnostic imaging session in progress (page 2 lines 8-15; page 8 lines 20-33).

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

All rejections under § 102 and § 103 are based on the following references:

Gropper et al., WO 03/046689 (hereinafter "Gropper"); and

Karmalawy et al., U.S. Pat. No. 6,603,991 (hereinafter "Karmalawy").

The following grounds of rejection are pending in this case:

Whether **claims 4-7, 10, 11, 14, and 15** are properly rejected under 35 U.S.C. § 102(b) as anticipated by Gropper;

Whether **claims 9, 12, and 13** are properly rejected under 35 U.S.C. § 103(a) as unpatentable over Gropper in view of Karmalawy; and

Whether **claims 3 and 8** are properly rejected without an articulated basis for the rejection.

VI. ARGUMENT

A. Brief comment on the present application.

The **present application** is directed to a diagnostic imaging modality of with a user interface that supports to a large extent the automated operation of the diagnostic imaging modality. To this end, in an illustrative embodiment a scheduler module (4) generates or constructs an ordered selection of operational items. A control system (2) controls execution of operational items by the diagnostic imaging modality (11), which in the illustrative embodiment is a magnetic resonance (MR) imaging apparatus although other imaging modalities such as computed tomography (CT) or ultrasound are also contemplated.

The operational items are executed on the basis of the ordered selection. The ordered selection of operational items includes the order of succession and the timing according to which the operational items are to be executed. Relationships between operational items may also be included in the ordered selection, such as the completion of one operational items being a condition to be fulfilled before a next operational item can be executed, or the precise way an operational item is to be executed depending on the result of a previous operational item.

The scheduler module generates ordered selection of various types of operational items. These various types relate to different functions of the diagnostic imaging system, such as acquisition of data, processing of the acquired data including reconstruction of images from the acquired data and image processing functions, viewing functions, such as setting the layout of the display, patient handling functions and handling of patient information, user interface functions such as issuing instructions, indicating progress or providing additional information. Such additional information for example includes also additional information or instructions to the operator in the event manual intervention by the operator is needed.

B. The Gropper reference and its proposed modification by the secondary Karmalawy reference.

Gropper relates to generating worklists of items. An item of a worklist is referred to in Gropper as a "worklist item or order" and such items are added to a worklist by a user placing an order, as described by way of illustrative example at Gropper ¶¶[0046] [0048].

Multiple such worklists may be maintained, including worklist items or orders for various entities. Of interest here, a modality worklist (206) may be maintained for a particular imaging system. Gropper ¶[0051]. The modality worklist (206) is viewed by a technician who handles orders for the modality. Gropper ¶[0053]. The disclosure pertaining to the modality worklist (206) is limited to two paragraphs – for convenience, those two paragraphs are reproduced in their entireties below:

> [0053] The modality worklist 206 is typically viewed by a technician who handles orders for a particular modality. In some embodiments, information from items in the modality worklist may be transferred to a worklist or data handling mechanism associated with the modality. For example, MRI systems typically handle a list of jobs to be completed, and patient data associated with each such job within the MRI system. In cases where automatic transfer of this information is impractical or unavailable, the worklist items can be entered into the modality by a technician.
>
> [0054] Once the images are properly scanned by the technician, the status of the worklist item is changed to "imaged". In some embodiments, this causes the worklist item to be made available in a technologist worklist 208, for verification. In some embodiments, the item remains in the appropriate modality worklist 208 to be verified. Some embodiments make items that have a status of "arrived" available in both the technologist worklist 208 and in an the appropriate modality worklist 206.

Gropper ¶¶[0053]-[0054] (boldface omitted).

There is no suggestion in Gropper that the worklist items or orders of a worklist are in any particular order or sequence. In this regard, *the term "order" as indicating a sequence, e.g. an "order of operations" should be carefully distinguished from the term "order" as in "a physician 'orders' an MRI"*. Gropper ubiquitously uses term "order" in the *latter* sense (e.g., "ordering" an MRI). The present application ubiquitously uses the word "order" in the *former* sense ("order of operations").

Moreover, Gropper actually leads away from "ordering" the worklist items in a particular order of operations. When displaying a worklist, Gropper discloses that the worklist may be sorted based on the viewer's preferences. See, e.g. Gropper ¶[0020] ("In some embodiments, the worklist items that are displayed are sorted according to a sort order specified in the set of display attributes associated with the worklist."); see also Gropper ¶[0081], [0122], and claim 26. Such sorting of the worklist for display leads away from the worklist having a particular meaningful ordering, since if the worklist items were in some particular meaningful order in the worklist then one would expect to display the worklist using that ordering.

Gropper also discloses that items may be added to a worklist based on urgency of the items (Gropper ¶[0108]) or that a worklist may be restricted to worklist items or orders that are to be performed in a particular time window. Gropper ¶[0109]. Again, neither of these disclosures suggest that the worklist items or orders are ordered in any particular fashion in the worklist.

Karmalawy is cited as (1) disclosing a patient support for moving a patient between two different imaging modalities, and (2) disclosing "modality guidance tools" which determine information should be provided to a technologist during an imaging session to guide a technologist through a properly orchestrated imaging protocol." Office Action mailed June 24, 2009 at page 4. Regarding (1), Appellants note that *no claim* of the present application recites a multi-modality imaging system.

C. Claims 4-7, 10, 11, 14, and 15 are not anticipated by Gropper.

Claim 6 recites a diagnostic imaging system comprising: a control system to control the execution of operational items by the diagnostic imaging system; and a user interface coupled to the control system, the user interface including a scheduler module which generates an ordered selection of operational items autonomously ordered by the scheduler module for execution under control of the control system, the ordered selection being generated by arranging the operational items in said ordered selection of operational items based on parameter settings of the operational items; wherein the scheduler module is configured to issue instructions to the user prompted by the operational items during the execution of the operational items.

Gropper does not disclose or fairly suggest a scheduler module which generates an ordered selection of operational items autonomously ordered by the scheduler module for execution under control of the control system. The Office Action alleges this is disclosed in Gropper ¶[0046]. Office Action page 2.

Gropper ¶[0046] discloses an order form by which a *clerk* may enter an order for work (e.g., an MRI) to be performed. In making this entry, the clerk may optionally include the date and time that the procedure is to start. There is no suggestion of a scheduler module which generates an ordered selection of operational items *autonomously ordered* by the scheduler module (*not* by a human clerk) for execution under control of the control system.

To the extent that any given worklist item or 'order' (here used in the sense of a physician's 'order' for a test) may have an associated time (e.g., a procedure start time), that time is entered in the order form by the clerk or other human user who specifies *manually* when the item or order is to be executed. Gropper ¶[0046]. Manual entry of a start time is not an autonomous ordering.

The manual specification of a time for a given worklist item disclosed at Gropper ¶[0046] does not disclose or fairly suggest (even in a manual sense) generating *an ordered selection of operational items* ordered for execution under control of the control system. There is no suggestion in Gropper that the (manually

entered) time associated with one item has any relationship with the manually entered time associated with any other item.

Indeed, not even an "ordering" that prevents "double booking" of the MRI is suggested. One might expect that in a modality worklist for an MRI two items should not allow two MRI orders be scheduled simultaneously since the MRI presumably can only image one person at any given time – but, since a human clerk manually enters the procedure start time, even such "double-booking" is actually a viable possibility for the modality worklist (206) of Gropper.

In response to arguments presented in Appellants' Response F filed on or about June 18, 2010 that Gropper does not disclose or fairly suggest that the worklist items are in any particular order or sequence, the final Office Action cites Gropper's statement that "Worklists are assembled [ordering of items] from worklist items by using a customizable set of scoping rules to determine the worklist items to be included in each worklist (Page 3, Para 0011)." Office Action page 6. Respectfully, on its own terms this passage merely describes the *selection* of worklist items to be included in each worklist – it says nothing about the *order* of those items in the worklist, much less of *autonomous* ordering of the items in the worklist based on parameter settings of operational items of a worklist. (The bracketed '....[ordering of items...] in the Examiner's quotation of Gropper was added by the Examiner and is properly bracketed in the Office Action to so indicate).

As a further response: "The Examiner contends that the order of operations is an important factor within the worklist of Gropper. For example, Figure 2 discloses a usage scenario of the worklists of Gropper. The wordlist would be inoperable if the worklist was performed out of order the Transcriptionist worklist cannot be completed until the Radiologist worklist was finished in order for there to be a radiology report to transcribe." Office Action page 6.

However, Gropper Fig. 2 is *not* showing a list of items in a worklist – rather, it is showing various *worklists* generated responsive to a physician's 'order' (again, in the sense of an order of a medical test). The worklist (202) for this 'order' is generated by entering relevant information into an order form, either manually or by automatic feed from a Hospital Information System (HIS). Gropper ¶¶[0047]-[0048]. There is no mention of any particular ordering, much less autonomous ordering. A human *clerk* may schedule an item of the worklist and that item may be placed into a

receptionist worklist (204). ¶[0049]. Again, this is not an autonomous scheduling – a *clerk* does the scheduling. The receptionist (another human being) updates the worklist to indicate the patient has arrived or canceled as appropriate. ¶[0050]. Worklist items may also be transferred to "sub"-worklists associated with individual entities, including one or more modality worklists associates with MRI or other medical imaging modalities. ¶¶[0051]-[0053]. Transfer of items from the order worklist (202) to the modality worklist (206) may be done manually or automatic population of the modality worklist. ¶[0053]. There is no fair suggestion of any autonomous ordering being performed in this transfer – merely selection and transfer of imaging-related physician 'orders' or worklist items (which are already scheduled by the human clerk) to the appropriate modality worklist (204). Once the images are scanned by a technician, the status for the worklist item is updated to "imaged". ¶[0054]. It is not stated whether this is a manual or automatic operation, but in any event it does not relate to any autonomous ordering of worklist items. The generated images may also be added to the worklist. ¶[0055]. This does not entail any autonomous ordering of the worklist – it merely discloses adding items (images) to a worklist when they become available.

The images are verified by an appropriate technician. Toward this end, a technologist worklist (208) is maintained which contains worklist items needed by a technician to track the images or studies that need to be verified. ¶[0056]. Once verified, the technician updates the item to 'verified'. ¶[0057]. Yet again, there is no mention of any particular ordering, much of less autonomous ordering.

A radiologist worklist (210) is also maintained which lists studies that need to be read by the radiologist. ¶[0058]. The resulting radiologist's report is added as another worklist item, and the radiologist may then add an appropriate report notation, such as 'dictated'. *Id.* A transcriptionist worklist (212) keeps track of the dictated reports to facilitate the (human) transcriptionist in typing out the dictated reports. ¶[0059]. These final typed reports are added to a finalized worklist (214). ¶¶[0060]-[0061].

In sum, Fig. 2 and the related text merely describes worklist items being added to appropriate worklists of a set of worklists (202, 204, 206, 208, 210, 212, 214) when those items become available, and being removed from a list when the item is completed. The Examiner is *not* correct in writing that "the Transcriptionist worklist

cannot be completed until the Radiologist worklist was finished in order for there to be a radiology report to transcribe." Office Action page 6. To the contrary, a fair reading of Gropper is that dictations are continually being added to the Transcriptionist worklist as radiologists complete report dictations, and are then removed when the transcription is complete. The workslists are never "finished" – they are a list of outstanding items that need to be completed.

On the other hand, it is accurate to say that a *given* transcription item cannot be completed until the corresponding radiologist's dictation item is complete. But, this order of operations is *not* achieved by a scheduler module performing autonomous ordering of items of a worklist. Rather, it is achieved by the simple expedient that the dictation is not added to the worklist for transcription until it is completed.

Moreover, there is no fair suggestion that the items in the transcriptionist worklist (212) (to use the Examiner's example) are ordered for execution in any way whatsoever. For example, suppose the radiologist dictates "dictation #1" and then dictates "dictation #2". Those dictations will be added to the Transcriptionist Worklist (212) in that order. *But*, there is no mechanism disclosed or fairly suggested in Gropper that would prevent the (human) transcriptionist from choosing to transcribe "dictation #2" first, followed by transcribing "dictation #1" (that is, to execute the items "out of order").

It should also be noted that claim 6 recites a scheduler module which *generates* an ordered selection of operational items autonomously ordered by the scheduler module *for execution under control of the control system*. An operation such as transcription also fails to meet this latter limitation, since the transcription is performed by a human transcriptionist who is not operating under control of the control system of the diagnostic imaging system.

In sum, nothing in Gropper Fig. 2 or the related text fairly suggests (much less expressly or inherently discloses, as required for a § 102 rejection) a scheduler module as recited in claim 6, which generates an ordered selection of operational items autonomously ordered by the scheduler module for execution under control of the control system.

As yet a further response, the Examiner cites Gropper's disclosure of automated adding or removal of worklist items in response to actions taken with respect to a data item. Office Action page 8. The cited text is as follows:

> [0013] In some embodiments, the method and system includes automated generation of a subset of the worklist items for inclusion in a worklist. Some embodiments include automated updating of a subset of the worklist items in response to an action being taken with respect to a data item in the set of data items. In some embodiments, the method and system includes automated adding or removal of worklist items in response to actions being taken with respect to a data item.
>
> Gropper ¶[0013].

This apparently refers, by way of example, to removal of a dictation file from the transcriptionist worklist when the transcription is finished and adding the transcribed report to the finalized worklist. Appellants do not see how adding or removing items from a worklist in response to actions taken with respect to a data item discloses, fairly suggests, or even relates to a *scheduler module* as recited in claim 6, which *generates an ordered selection of operational items autonomously ordered by the scheduler module* for execution under control of the control system. It does not disclose *autonomous* ordering, and indeed does not disclose any *ordering* of the worklists at all. Items are disclosed as being added, but not in any particular order.

Continuing on with claim 6, Gropper also does not disclose or fairly suggest a scheduler module *configured to issue instructions to the user prompted by the operational items during the execution of the operational items*. The Office Action cites Gropper ¶¶[0009], [0011], [0013], [0014], [0036], [0048], and Gropper claims 24 and 26 as disclosing this subject matter. Office Action page 2.

The cited sections of Gropper do not disclose or fairly suggest a scheduler module configured to issue instructions to the user prompted by the operational items during the execution of the operational items. For example, claim 24 merely discloses displaying the worklist, while claim 26 merely states that the display of the work list can be sorted in accordance with some specified sort order.

The Office Action cites a broad scope for "operational items" set forth in the present application. Office Action pages 3-4. However, *claim 6* is not merely reciting any type of display of worklist items. Rather, claim 6 is quite detailed and explicit – the scheduler module is configured to issue *instructions* (not merely information such as a list of worklist items) to the user *prompted by the operational items* (the displaying of the worklist is not prompted by any operational item of the worklist) *during execution of the operational items [by the diagnostic imaging system under control of the control system, as per earlier recitation in claim 6]* (the display of the worklist in Gropper claims 24 and 26 is not tied to the execution of any particular worklist item, much less execution of an operational item by a diagnostic imaging system under control of a control system).

Claim 15 recites a *control system to control the execution of operational items* by [a] diagnostic imaging system *on the basis of an execution list*, and a user interface coupled to the control system, the user interface including *a scheduler module which generates an ordered selection of operational items*, wherein *the scheduler module autonomously orders the operational items* by arranging the operational items in said ordered selection of operational items based on respective parameter settings of the operational items, and wherein *the scheduler module releases operational items to the execution list according to the ordered selection* and *provides progress information* to the user interface during a diagnostic imaging session related to the way the execution of operational items is advancing in the diagnostic imaging session in progress.

Gropper does not disclose or fairly suggest a scheduler module which generates an ordered selection of operational items [and] releases operational items to the execution list according to the ordered selection and provides progress information to the user interface during a diagnostic imaging session related to the way the execution of operational items is advancing in the diagnostic imaging session in progress.

Rather, Gropper discloses a clerk or other human user *manually* assigning a procedure start time for an MRI procedure. ¶[0049]. That start time may be automatically populated into the modality worklist (206) (¶[0053]), but it is still assigned *manually*, not by an automated scheduler module.

Moreover, regardless of the assigned procedure start time, the MRI procedure is not necessarily performed at that start time, or in the order of start times in the case of multiple scheduled MRI procedures. This is so because there is no scheduler module in Gropper that releases operational items to the execution list according to the ordered selection (which, as per claim 15, ensures that the ordered selection of operational items is actually followed). Rather, the MRI facility may process patients "out of order" – nothing in Gropper prevents this from occurring.

Regarding the recitation of "...and provides progress information...", the Office Action alleges this subject matter is disclosed in Gropper ¶[0054] and claim 18. Gropper ¶[0054] is quoted herein above, and states: "Once the images are properly scanned by the technician, the status of the worklist item is changed to 'imaged'". This discloses providing "progress information" only *after* the imaging session is complete, and does not relate to the way in-progress diagnostic imaging is progressing. Claim 15, in contrast, recites the scheduler module "provides progress information to the user interface *during* a diagnostic imaging session *related to the way the execution of operational items is advancing* in the diagnostic imaging session *in progress*." Further, Gropper does not disclose any automated mechanism by which the status of the worklist item is changed to 'imaged'. A reasonable reading of Gropper ¶[0054] is that the (human) technician makes this change in the worklist item after the imaging is complete.

Still further, Gropper does not disclose or fairly suggest the recitation in claim 15 that the scheduler module *autonomously* orders the operational items by arranging the operational items in said ordered selection of operational items based on respective parameter settings of the operational items. As already discussed respective to claim 6, at most Gropper discloses *manual* assignment of procedure start times.

In view of the foregoing, Appellants again urge the Board to reverse the § 102(b) anticipation rejections of claims 4-7, 10, 11, 14, and 15.

D. Claims 9, 12, and 13 patentably distinguish over the proposed combination of Gropper and Karmalawy.

Claims 12 and 13 depend from and incorporate all limitations of base claim 6. As set forth in Section B, the subject matter of claim 6 distinguishes patentably over Gropper. The Office Action does not allege that Karmalawy addresses any of the deficiencies of Gropper identified in Section B. Accordingly, it is respectfully submitted that claims 12 and 13 distinguish patentably over the proposed combination of Gropper and Karmalawy.

Claim 9 recites a magnetic resonance imaging system comprising: a control system to control the execution of operational items by the magnetic resonance imaging system; a user interface coupled to the control system, the user interface including *a scheduler module which generates an ordered selection of operational items for execution controlled by the control system*, wherein the scheduler module *autonomously orders* the operational items by arranging the operational items in said ordered selection of operational items based on respective parameter settings of the operational items; and a displaceable patient support; wherein the control system is set up to displace the patient support among various imaging stations and conduct several different magnetic resonance imaging sequences at individual imaging stations, the control system grouping all image acquisition sequences to be performed at each individual station together and performing all image acquisition sequences to be performed at each individual station together before the patient support is moved to a next station of the various imaging stations.

Gropper does not disclose or fairly suggest a scheduler module which generates an ordered selection of operational items for execution controlled by the control system. Rather, Gropper discloses a clerk or other human user manually assigning a procedure start time for an MRI procedure. Moreover, Gropper does not disclose or fairly suggest a scheduler module that *autonomously* orders the operational items by arranging the operational items in said ordered selection of operational items based on respective parameter settings of the operational items. Rather, at most Gropper discloses *manual* assignment of procedure start times.

The last portion of claim 9 is now addressed. Claim 9 *actually recites* the following (italics and underscore added for emphasis):

> a *magnetic resonance imaging system* comprising: ... a displaceable patient support; wherein the control system is set up to displace the patient support *among various imaging stations* and conduct *several different magnetic resonance imaging sequences* at individual *imaging stations*, the control system grouping all image acquisition sequences to be performed at each individual *station* together and performing all image acquisition sequences to be performed at each individual *station* together before the patient support is moved *to a next station* of the *various imaging stations*

A verbatim articulation of the rejection is as follows:

> Gropper teaches various imaging modalities [MRI, X-ray, etc] (page 15, Para 0051) but fails to teach patient displacement among the various imaging modalities. However, Karmalawy teaches a displaceable patient support (Figure 7, Element 7) controlled by a control system to displace the patient support among the various imaging stations (Col. 5, Line 59-67).
>
> It would have been obvious to one of ordinary skill in the art to modify the system of Gropper to include control of a displaceable patient support as taught by Karmalawy in order to allow for close correspondence between the locations of the patient's internal organs during both a CT scan and a NM scan, which will provide more detailed or richer view of the patient's internal organs (Col. 5, Lines 36-44).
>
> Office Action page 5.

This rejection is simply *not relevant* to the subject matter of claim 9. The Examiner has articulated why a *multimodality imaging* system might be obvious in view of the proposed combination of Gropper and Karmalawy. Respectfully: So what? Claim 9 is

not directed to such a system. Claim 9 is directed to a *magnetic resonance imaging* system configured to perform multi-*station* magnetic resonance imaging. There is no mention of multi-modality imaging in claim 9.[1]

Again, to be clear -- Claim 9 actually recites the control system is set up to displace the patient support among various imaging stations and conduct several *different magnetic resonance imaging* sequences [*not* imaging by different imaging *modalities* such as CT and NM, neither of which happen to be an MRI system which is the subject matter of claim 9] at individual imaging stations, the control system *grouping all image acquisition sequences to be performed at each individual station together* [*the articulated rejection does not even mention this*] and performing all image acquisition sequences to be performed at each individual station together before the patient support is moved to a next station of the various imaging stations [again, *the articulated rejection does not even mention this*].

The key to supporting any rejection under § 103 is a clear articulation of the reason(s) why the claim would have been obvious. MPEP § 2142. Rejections on obviousness cannot be sustained with mere conclusory statements. *Id.* Rather, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness. *Id.*

The articulated rejection of claim 9 is *not* articulated reasoning with some rational underpinning that supports a legal conclusion of obviousness of claim 9 – indeed, it is not even directed to the subject matter of claim 9.

In view of the foregoing, Appellants urge the Board to reverse the § 103(a) obviousness rejections of claims 9, 12, and 13.

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[1] That said, in view of the open construction of the "comprising" transition phrase used in claim 9, it is respectfully submitted that claim 9 *would* properly read upon a multimodality imaging system including a magnetic resonance imaging (sub-)system that meets all limitations of claim 9 and *additionally* includes some other imaging (sub-)system such as a computed tomography (CT) imaging (sub-)system, nuclear medical (NM) imaging (sub-)system, or so forth.

E. Claims 3 and 8 are not properly rejected.

The Office Action Summary sheet lists claims 3 and 8 as rejected. However, the Office Action articulates no basis for these rejections.

In every Office Action, each pending claim should be mentioned by number, and its treatment or status given. MPEP § 707.07(i). Where a claim is refused for any reason relating to the merits thereof it should be "rejected" and the ground of rejection fully and clearly stated. MPEP § 707.07(d). The examiner should designate the statutory basis for any ground of rejection by express reference to a section of 35 U.S.C. in the opening sentence of each ground of rejection. *Id.*

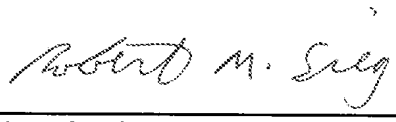
It is respectfully submitted that merely listing: "Claim(s) 3-15 is/are rejected" on the Office Action Summary sheet, without providing an articulated basis of rejection setting forth the statutory basis for the rejection of claim 3 or claim 8, does not constitute a proper rejection of these claims.

There being no proper rejection of claim 3 and 8, Appellants urge that the rejection of claims 3 and 8 be reversed.

CONCLUSION

For all of the reasons discussed above, it is respectfully submitted that the rejections are in error and that all pending claims 3-15 are in condition for allowance. For all of the above reasons, Appellants respectfully request this Honorable Board to reverse the all pending rejections of the appealed claims.

Respectfully submitted,



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APPENDICES

VII. CLAIMS APPENDIX

Claims involved in the Appeal are as follows:

3. A magnetic resonance imaging system as claimed in claim 9, wherein the control system controls the execution of operational items on the basis of an execution list and the scheduler releases operational items according to the ordered selection.

4. A diagnostic imaging system as claimed in claim 15, wherein the scheduler module releases operational items in dependence of successful completion of preceding operational items of the ordered selection.

5. A diagnostic imaging system as claimed in claim 15, wherein the scheduler module is provided with a memory, in particular a database with a browser, to store scan schedules.

6. A diagnostic imaging system comprising:

a control system to control the execution of operational items by the diagnostic imaging system; and

a user interface coupled to the control system, the user interface including a scheduler module which generates an ordered selection of operational items autonomously ordered by the scheduler module for execution under control of the control system, the ordered selection being generated by arranging the operational

items in said ordered selection of operational items based on parameter settings of the operational items;

wherein the scheduler module is configured to issue instructions to the user prompted by the operational items during the execution of the operational items.

7. A diagnostic imaging system as claimed in claim 15, wherein the scheduler module is arranged to make available to the user interface a description of the operational item being released to the execution list.

8. A magnetic resonance imaging system as claimed in claim 3, wherein the scheduler module is arranged to provide progress information to the user interface, said progress information being related to the way the execution of operational items is advancing.

9. A magnetic resonance imaging system comprising:

a control system to control the execution of operational items by the magnetic resonance imaging system;

a user interface coupled to the control system, the user interface including a scheduler module which generates an ordered selection of operational items for execution controlled by the control system, wherein the scheduler module autonomously orders the operational items by arranging the operational items in said ordered selection of operational items based on respective parameter settings of the operational items; and

a displaceable patient support;

wherein the control system is set up to displace the patient support among various imaging stations and conduct several different magnetic resonance imaging sequences at individual imaging stations, the control system grouping all image acquisition sequences to be performed at each individual station together and performing all image acquisition sequences to be performed at each individual station together before the patient support is moved to a next station of the various imaging stations.

10. The diagnostic imaging system as claimed in claim 15, wherein the diagnostic imaging system is a magnetic resonance imaging system.

11. The diagnostic imaging system as claimed in claim 6, wherein the diagnostic imaging system is a magnetic resonance imaging system.

12. The diagnostic imaging system as claimed in claim 11, wherein the scheduler module is arranged to issue an instruction to the user prompted by execution of an operational item calling for applying a surface RF coil.

13. The diagnostic imaging system as claimed in claim 6, wherein the scheduler module is arranged to issue an instruction to the user prompted by execution of an operational item calling for infusion of contrast agent.

14. The diagnostic imaging system as claimed in claim 15, wherein the scheduler module supports an editing mode in which an operator can edit the autonomously ordered selection of operational items.

15. A diagnostic imaging system comprising:

a control system to control the execution of operational items by the diagnostic imaging system on the basis of an execution list; and

a user interface coupled to the control system, the user interface including a scheduler module which generates an ordered selection of operational items, wherein the scheduler module autonomously orders the operational items by arranging the operational items in said ordered selection of operational items based on respective parameter settings of the operational items, and wherein the scheduler module releases operational items to the execution list according to the ordered selection and provides progress information to the user interface during a diagnostic imaging session related to the way the execution of operational items is advancing in the diagnostic imaging session in progress.

VIII. EVIDENCE APPENDIX

NONE

IX. RELATED PROCEEDINGS APPENDIX

NONE